

REMARKS

Claims 19-59 are pending in this application. By this Amendment, claims 33, 38, 39, 43, and 45 are amended and claims 48-59 are added. No new matter has been added.

I. Information Disclosure Statement

The Examiner is requested to consider the information submitted in the Information Disclosure Statement filed herewith. The Examiner is requested to return an initial PTO-1449 with the next Patent Office communication.

II. Allowed Claims

Applicant appreciates the Office Action's indication that claims 19-32 and 46-47 are allowed.

III. Claim Objection

The Office Action objects to claim 38 under 37 C.F.R. 1.75 as being a substantial duplicate of claim 25.

By this Amendment, claim 38 is amended to depend from claim 37. Thus, Applicant requests withdrawal of the objection.

IV. Claim rejection under 35 U.S.C. §112

The Office Action rejects claims 39, 43 and 45 under 35 U.S.C. §112, second paragraph as being indefinite for not having antecedent basis for, and not defining, "the parameter β ." By this Amendment, claims 39, 43 and 45 are amended to define and provide antecedent basis for parameter β . Thus, Applicant requests withdrawal of the rejection.

V. Claim Rejection under 35 U.S.C. §102 over Matsushita

The Office Action rejects claims 33, 37 and 40-41 under 35 U.S.C. §102(a) over U.S. Patent Publication No. 2002/0126390 to Matsushita et al. (Matsushita). Applicant respectfully traverses the rejection.

Regarding independent claim 33, Matsushita fails to disclose (1) an optical integrator and (2) first and second optical members separated by a space as claimed. Matsushita discloses a lens array (lens resin layer 17, also called transparent resin layer 17) having a plurality of lens surfaces corresponding one-to-one with the pixels of a liquid crystal display device, the lens array being provided for making incident light vertically enter into each of the pixels. However, the lens array of Matsushita et al. is not an optical integrator for unifying the light quantity distribution of the incident light beam, and thus Matsushita fails to disclose the optical integrator as claimed. Further, the lens array of Matsushita comprises three transparent resin layers 16-18 which are tightly in contact with each other. Thus, Matsushita fails to disclose first and second optical members separated by a space as claimed.

For the foregoing reasons, Applicant requests withdrawal of the rejection.

VI. Claim Rejection under 35 U.S.C. §102 over Kasuyama

The Office Action rejects claims 33, 37 and 40-41 under 35 U.S.C. §102(e) over U.S. Patent No. 6,757,106 to Kasuyama. Applicant respectfully traverses the rejection.

Kusuyama discloses a lens 1 that is a lens array for columnating the output from a semiconductor laser array (col. 10, lines 62-64). Lens 1 comprises a first optical member array 2 embedded in a second optical member 3. The first optical member array 2 comprises a plurality of columnar optical members 10 (lenses), each having a first optical action portion 11 for respectively collimating the plurality of lasers emitted from the plurality of light emitting portions 21 (semiconductor laser elements) of semiconductor laser array 20 (Fig. 3).

Thus, Kusuyama fails to disclose (1) first and second optical members, both having a plurality of minute refraction surfaces and (2) "the first optical member and the second optical member are separated by a space" as in claim 33.

The Office Action alleges, at the bottom of page 3 and top of page 4, that the second optical array 3 corresponds to the plurality of first minute refraction surfaces and the "second

optical member 10" corresponds to the plurality of second minute refraction surfaces. However, second optical member 3 does not have any structure corresponding to minute refraction surfaces because second optical member 3 is flat on both sides. As shown in Fig. 3, the light rays entering and exiting from second optical member 3 do not refract. Further, if the second optical member 3 and first optical member array 2 are considered to correspond to the recited first and second optical members, Kusuyama does not disclose nor suggest the provision of "first and second optical members separated by a space from each other" (see, for example, Fig. 3 showing first optical member array 2 embedded in second optical member 3).

For the foregoing reasons, Applicant requests withdrawal of the rejection.

VII. Claim Rejection under 35 U.S.C. §102 over Shimizu

The Office Action rejects claims 33, 37 and 40-41 under 35 U.S.C. §102(e) over Japanese Patent Publication No. JP 2000-098102 to Shimuzu et al. (Shimizu). Applicant respectfully traverses the rejection.

Shimizu discloses the formation of a lens array by laminating transparent resin films. However, Shimizu fails to disclose the provision of first and second optical members separated by a space from each other (see Fig. 8). Further, in a variation, Fig. 7 of Shimizu shows the lens array substrates before the substrates are bonded together. When these lens array substrates are bonded together, the lens surfaces are tightly formed in contact as shown in Fig. 4.

For the foregoing reasons, Applicant requests withdrawal of the rejection.

VIII. Claim Rejection under 35 U.S.C. §103 over Kasuyama in view of Yamaguchi

The Office Action rejects claims 34-35 under 35 U.S.C. §103(a) over Kasuyama in view of Japanese Patent Publication No. JP 07-098402 to Yamaguchi et al. (Yamaguchi). Applicant respectfully traverses the rejection. These claims are patentable for at least the reasons set forth above with respect to claim 33.

For the foregoing reasons, Applicant requests withdrawal of the rejection.

IX. Claim Rejection under 35 U.S.C. §103 over Shimizu in view of additional references

The Office Action rejects claims 42 and 44 under 35 U.S.C. §103(a) over Shimizu in view of either U.S. Patent No. 6,741,394 to Tanitsu et al. (Tanitsu '394) or German Patent Publication No. DE 100 62 579 to Tanitsu et al. (Tanitsu '579). Applicant respectfully traverses the rejections. Claims 42 and 44 are patentable for the same reasons as their base claims 33 and 40 are patentable. For the foregoing reasons, Applicant requests withdrawal of the rejections.

X. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachments:

Amendment Transmittal
Information Disclosure Statement

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